



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,830	12/04/2003	Clinton L. Jones	59358US002	7444

32692 7590 02/13/2006

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/727,830	Applicant(s) JONES ET AL.	
	Examiner Susan W. Berman	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 14-18 and 20-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/05</u> <i>2 pages</i> | 6) <input type="checkbox"/> Other: _____ |

Restrictions

Applicant's election without traverse of Group I, claims 1-13 and 19 in the reply filed on 11/19/2005 is acknowledged. Claims 14-18 and 20-27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/19/2005.

Response to Arguments

Applicant's arguments filed 11/18/2005 have been fully considered but they are not persuasive. Applicant argues that the data in the specification provides evidence of a higher conversion of monomeric components to polymeric components resulting from the particular kinds and amounts of photoinitiator employed. Applicant further argues that the higher conversion "is surmised" to result in improved properties and points out that the top down hardness was found to be greater than 350 MPa. Groove tip deformation and other properties are also mentioned; however, no comparative data is of record. The comparative data in the specification has been considered and found unpersuasive for the following reasons.

With respect to comparative examples A and B which are said to represent a known prior art "first" brightness enhancing film in the IDS filed 03/12/2004, it is not clear what substance "PEA" is. It is suggested that if applicant intends to rely upon comparative data representing the "first" brightness enhancing film to distinguish the instantly claimed film, the information in the IDS filed 3/12/2004 identifying the components of the compositions must be in the form of an Affidavit. Also, since applicant states the kinds and amounts of photoinitiator are responsible for the difference in monomer conversion, a comparative example representing the "first brightness enhancing film" in question should contain 2 pph "Darocur 4265" rather than the 1 pph Darocur 1173 in the Comparative A Example or the 1

Art Unit: 1711

pph Lucerin TPO in the Comparative B Example. Neither Example is considered to represent the prior art “first brightness enhancing film” mentioned in the IDS.

Applicant has not provided any data for the cited prior art “second brightness enhancing film”. Therefore, the rejection is maintained.

Even is the comparative examples in the specification were considered representative of the cited prior art, the difference in conversion of monomer, i.e. lower FTIR, and “gain” shown in the Table in paragraph [0055] does not appear to be a significant improvement. Furthermore, the claim language in the instant claims is not considered to be commensurate in scope with the compositions alleged to show unexpected results.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 and 19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended the claims to set forth that component c is a (meth)acrylate crosslinking agent having “at least three reactive groups”. It is not clear whether the three reactive groups are (meth)acrylate groups or other kinds of reactive groups in addition to a (meth)acrylate group. Claim 11 is indefinite because it recites a “hexa-functional aromatic urethane oligomer” but fails to identify the kinds of functional groups other than one (meth)acrylate group in the oligomer.

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by a commercially available liquid crystal display panel comprising a “first” brightness enhancing film as disclosed in the “Supplemental Information Disclosure Statement” submitted by Applicant on March 12, 2004. Applicant states that the brightness enhancing film is a reaction product of the same composition as Comparative Examples A and B of the instant application except that the photoinitiator consisted of 2 pph “Darocur 4265”. Darocur 4265 is a 1:1 blend of 2-hydroxy-2-methylpropiophenone (“Darocur 1173”) and diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide (Darocur TPO). The instant claims are anticipated because the claims are drawn to the reaction product, i.e. the polymer obtained by polymerizing the acrylate –functional components set forth in Table 1 in the instant application. The polymerization product, i.e. applicant’s claimed brightness enhancing film, would be expected to be the same although a different photoinitiator was employed to initiate polymerization. The photoinitiator is employed as initiator and is not a part of the polymerization product unless a polymerizable photoinitiator is employed. Thus, in the absence of evidence to the contrary, the reaction product of the acrylate-functional components a-c of the composition corresponding to the instantly claimed composition and admitted to have provided the reaction product of the commercially available brightness enhancing film.

Claims 1-13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by a commercially available liquid crystal display panel comprising a “second” brightness enhancing film as disclosed in the “Supplemental Information Disclosure Statement” submitted by Applicant on March 12, 2004. Applicant states that the second brightness enhancing film was independently developed by a contract supplier and thus the composition is not known. Applicant states that the composition comprises the kinds and amounts of reactants claimed in the instant US patent application 10/727830 except for the photoinitiator. The instant claims are considered to be anticipated because the claims are drawn to the reaction product,

Art Unit: 1711

i.e. the polymer obtained by polymerizing the acrylate –functional components set forth in Table 1 in the instant application. The polymerization product, i.e. applicant's claimed brightness enhancing film, would be expected to be the same although a different photoinitiator was employed to initiate polymerization. The photoinitiator is employed as initiator and is not a part of the polymerization product unless a polymerizable photoinitiator is employed. Thus, in the absence of evidence to the contrary, the reaction product of the acrylate-functional components a-c of the composition corresponding to the instantly claimed composition and admitted to have provided the reaction product of the commercially available brightness enhancing film. With respect to the recitation of pph and absorbance of the photoinitiator in claims 1-4 and the recitations of acylphosphine oxide photoinitiators in claims 6 and 19, the commercially available brightness enhancing film is disclosed to have been produced using a photoinitiator not having these properties or structure; however, the instantly claimed brightness enhancing film would be expected to be the same as that instantly claimed, in the absence of evidence to the contrary. The reasons is that the film is the reaction product of the acrylate-functional monomers, not of the photoinitiator employed to initiate polymerization.

Claims 1-13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (5,855,983) in view of Nishio et al (5,714,218). Williams discloses a flame resistant UV cured multi-layered film wherein the first layer is obtained from a UV curable composition. Components corresponding to (a) and (b) set forth in the instant claims are taught in column 3, line 51, to column 4, line 3. Crosslinking agents including urethanes such as EB 220 are taught in column 6, lines 13-33. Williams teaches that a photoinitiator can be used, but does not mention any specific photoinitiators (column 3, lines 33-43).

Nishio et al disclose cured products for optical articles obtained by polymerizing compositions comprising components corresponding to applicant's (a), (b) and (c) components in instant claim 1. See

Art Unit: 1711

column 4, lines 1-30, column 8, line 65, to column 10, line 36, column 11, line 61, to column 12, line 42, and Table 1. Applicant's component (a), i.e. 2,4,6-tribromophenoxyethyl acrylate, is taught in column 4, line 29, and column 10, lines 1-14. Nishio et al component (a) corresponds to applicant's component (b) and also to component (c). Nishio et al teach adding monomers or oligomers having at least two functional groups. Nishio et al teach properties of a suitable photoinitiator corresponding to those set forth in the instant claims (column 12). Irgacure 184 and Darocur 1173 are used in the examples; however, Nishio et al clearly teach that photoinitiators such as 2,4,6-trimethylbenzoyldiphenylphosphine oxide are preferred and have the properties set forth in the instant claims.

It would have been obvious to one skilled in the art at the time of the invention to employ any of the photoinitiators such as 2,4,6-trimethylbenzoyldiphenylphosphine oxide, taught by Nishio et al, in the compositions disclosed by Williams. Williams provides motivation by teaching that photoinitiators and UV curing can be sued. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of success to employ any of the photoinitiators taught by Nishio et al in the composition disclosed by Williams because the components to be cured in the composition disclosed by Williams are the same or analogous to those disclosed by Nishio et al.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 1711

Claims 1-10, 12, 13 and 19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 and 19 of copending Application No. 10/748,049 [Publication No. US 2005/014835]. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The claims of '049 recite a brightness enhancing film comprising the reaction product of the same components as set forth in the instant claims. Component (a) corresponds to applicant's (b), component (b) corresponds to applicant's (a) and component (c) and (d) correspond to applicant's components (c) and (d). It would have been obvious to one skilled in the art at the time of the invention to employ any of the specific crosslinking agents set forth in the claims of '049 as the crosslinking agent set forth in the instant claims to provide the instantly claimed brightness enhancing film. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of success because the other components are equivalent and contain acrylate-functional groups for crosslinking.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-10, 12, 13 and 19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/747985. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The claims of '985 recite a brightness enhancing film comprising the reaction product of the same components as set forth in the instant claims. Component (a) corresponds to applicant's (b), component (b) corresponds to applicant's (c), component (c) corresponds to applicant's component that is a non-halogenated (meth)acrylate monomer, and component (d) corresponds to applicant's component (d). The difference is that the claims of '985 do not set forth the instantly claimed brominated phenoxyethyl (meth)acrylate; however, the comprising language of the claims encompasses

Art Unit: 1711

this specific monomer. It would have been obvious to one skilled in the art at the time of the invention to include a brominated phenoxyethyl (meth)acrylate in the compositions set forth in the claims of '985 since it is a species of phenoxyethyl(meth)acrylate monomer. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully obtaining a reaction product useful as a brightness enhancing film. It would have been obvious to one skilled in the art at the time of the invention to employ any of the specific crosslinking agents set forth in the claims of '985 as the crosslinking agent set forth in the instant claims to provide the instantly claimed brightness enhancing film. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of success because the other components are equivalent and contain acrylate-functional groups for crosslinking.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1711

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB
2/6/06



Susan W Berman
Primary Examiner
Art Unit 1711